

THE CLINICAL SIGNIFICANCE OF SMALL POLYPOID TUMORS OF THE STOMACH*

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ALTHOUGH the word “polyp” should be used with reference only to a gross morphological characteristic of tumors, for most observers it carries a definite histological connotation — that of a benign adenomatous growth. Some controversy has arisen lately with reference to the long accepted hypothesis that gastric adenomas are in some instances precursors of gastric cancer. A policy of observation by radiography and gastroscopy, rather than immediate excision, has been advocated in some clinics, surgery being recommended only for those polyps showing suspicious signs of malignancy — increase in size, ulceration, character of the surface of the polyp and surrounding mucosa, etc. — or giving rise to serious complications such as obstruction or bleeding. The purpose of this study was to determine the degree of accuracy of our present clinical diagnostic means, mainly radiography and endoscopy, in establishing prior to operation the histologic type of small polypoid tumors of the stomach.

Between the years 1947 and 1957 a preoperative diagnosis of gastric polyp was made in 50 patients at Memorial Center. All the patients were operated upon and thus pathological confirmation was obtained in every case. Freedom from symptoms was observed in 24 of the patients, most of whom were first seen at the Strang Cancer Prevention Clinic of the Memorial Center.

Age and Sex. The average age of the group was 54.9 years, with a range of 28 to 69 years. There were 39 women and 11 men.

X-ray Diagnosis. When a single, round, smooth, sessile or pedunculated negative shadow is seen inside the lumen of the stomach during

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TABLE I—PREOPERATIVE DIAGNOSIS: 50 SINGLE "POLYPS"

I. Epithelial	30	
a) Benign	26	
Adenomatous polyp		25
Ectopic pancreas		1
b) Malignant	4	
II. Mesenchymal	13	
a) Benign	11	
Inflammatory polyp		4
Eosinophylic granuloma		2
Leiomyoma		4
Lipoma		1
b) Malignant (leiomyosarcoma)	2	
III. Polyp unclassified	4	
IV. No polyp found at exploration	3	

a gastrointestinal series, the assumption is usually made that it is due to a polyp. At least such a diagnosis is usually a first consideration. When all such lesions are subjected to biopsy, however, we observe that histologic accuracy cannot be expected of the radiologist. Table I shows that, in our experience, only 50 per cent of the lesions proved ultimately to be adenomatous polyps. The other diagnoses are listed in the table. Furthermore, four small adenocarcinomas and two leiomyosarcomas were observed. It is evident then that x-ray studies alone cannot give, with reasonable accuracy, a conclusive diagnosis concerning the histologic nature of a small polypoid tumor of the stomach.

Gastroscopy. In our hands, gastroscopic examination has not shown the same degree of accuracy reported by other investigators. The procedure was performed on 32 patients. In 14, the lesion seen by the radiologist could not be visualized through the gastroscope, although definite pathology was found at laparotomy in 13, of which six were adenomatous polyps, five were benign non-epithelial lesions, one was an adenomatous polyp with malignant transformation, and one was a case of diffuse antral polyposis with cancerous changes. In the remaining case, only enlarged rugal folds were found at surgery. In 14 other cases, polypoid tumors showing no suspicious signs of malignancy to the gastroscopist were described. Of these, seven were adenomatous polyps, four were benign non-epithelial polyps, one was a leiomyosarcoma and

TABLE II—DIAGNOSIS IN ADENOMAS OF THE STOMACH

	<i>Pathological Diag.</i>		<i>Total</i>
	<i>Adenoma</i>	<i>Cancer</i>	
I. Single Adenomatous Polyp	22	0	22
II. Multiple Adenomatous Polyps	7	4	11
III. Polyposis	9	2	11
IV. Polypoid Carcinoma Arising from Adenoma	0	10	10

one was an unclassified polyp on microscopic examination. In one case no tumor was found at the time of the gastrotomy. A definite suspicion of cancer seemed to be present, according to the endoscopist, in three instances, of which two proved to be benign adenomas, and in the third case a lesion of the stomach could not be found at operation. Finally, there was one case in which the gastroscopic diagnosis was "submucosal neoplasm", which was later shown to be a benign adenomatous polyp at laparotomy.

Small, curable, malignant tumors parading as innocuous benign neoplasms were surgically removed in six patients (12 per cent) because of our policy of submitting all such patients to operation, rather than permitting ourselves the luxury of being guided by clinical impressions. Postoperative mortality did not occur and all have passed the five year period of observation, which is tantamount to cure.

What are the diagnostic and prognostic implications created by the presence of single and multiple adenomatous polyps in the stomach? Table II demonstrates this quite clearly. In none of the 22 cases where a true adenomatous polyp was found at laparotomy and subjected to frozen-section study was carcinoma present. Incidentally, subsequent examination of paraffin sections confirmed the accuracy of the quickly prepared frozen-sections made at the time of laparotomy. Of the 11 instances in which more than one polyp was found at operation and its adenomatous features confirmed, the presence of cancer was established in four. Furthermore, in an additional 11 cases of true polyposis, cancer was present in two. The fact that carcinomatous change had occurred in six of 22 cases (27.3 per cent) in which more than one adenomatous polyp was present in the same stomach indicates the seriousness with

which such a clinical setting must be appreciated. Since Berg¹ has demonstrated quite clearly both benign and carcinomatous changes in the same adenomatous polyp of the stomach, the close relationship of these two tumors cannot be denied. Finally, we observed 10 cases of infiltrating polypoid gastric cancer in which there was positive evidence of a direct association with a benign adenomatous process. Most of these patients died of cancer.

CONCLUSIONS

1. The clinical diagnosis of small polypoid tumors of the stomach is misleading and inaccurate.
2. The fallacious management of such lesions by any method short of laparotomy and histologic interpretation of biopsy material is obviously dangerous and unwarranted.
3. The relation between adenomatous polyps and gastric cancer is discussed.

REFERENCE

1. Berg, John. Histological aspects of the relation between gastric adenomatous polyps and gastric cancer. *Cancer* 11: 1149-55, 1958.